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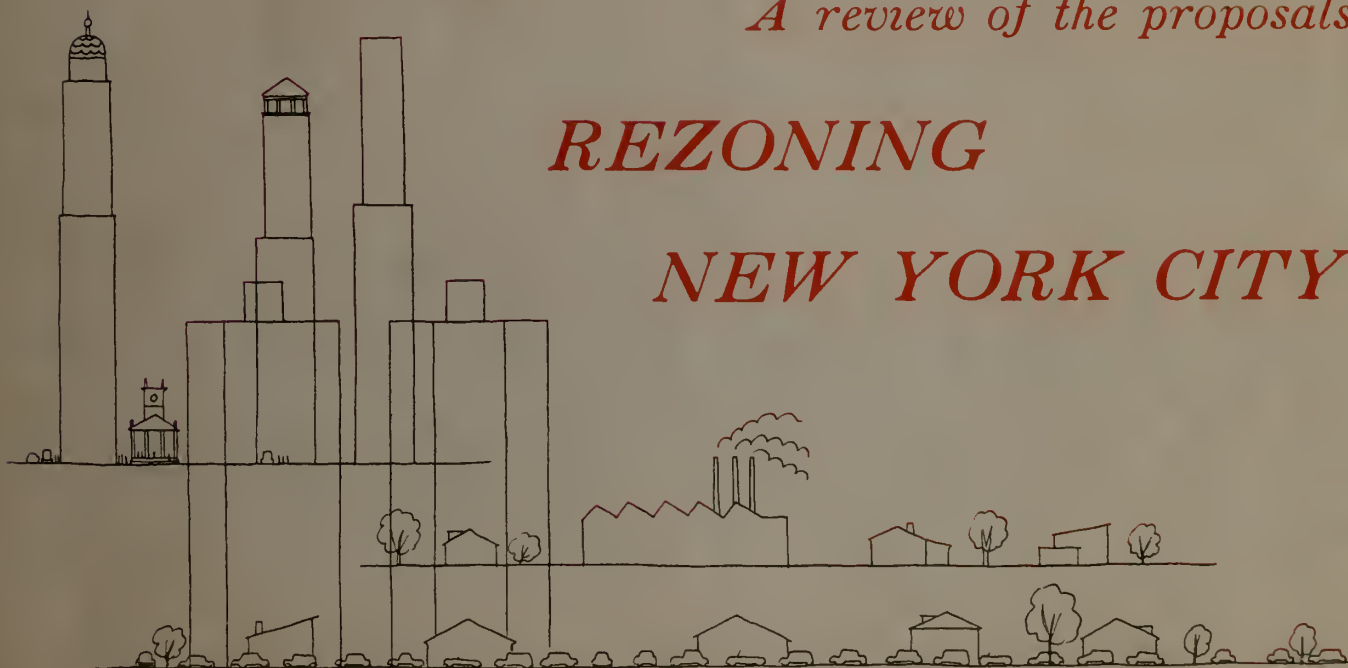
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*The New York Chapter, American Institute of Architects*

*A review of the proposals for*

**REZONING**

**NEW YORK CITY**



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*A review of the proposals for*

***REZONING  
NEW YORK CITY***

**EDITED AND DESIGNED BY BAKER-FUNARO**

Prepared under the direction of the Committee on Civic Design and Development — Geoffrey Platt, Chairman — as a special research project financed by the Arnold W. Brunner Fund, 1950.

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## **FOREWORD**

*by the New York Chapter, American Institute of Architects*

Since the passage of the Zoning Resolution in 1916, the architects of New York City have had ample experience in the application of its principles. In the light of such experience, it has become apparent that this original Zoning Resolution, with its many amendments, constitutes a cumbersome and inadequate medium for regulating the city's growth.

When the firm of Harrison, Ballard and Allen were retained as consultants by the Planning Commission to study a new Resolution, the New York Chapter, American Institute of Architects, gave its complete support to the project.

The resulting proposals for a new Resolution are now available to the public. They consist of two parts: 1) a general report; and 2) a draft of proposed legis-

lation, accompanied by maps and diagrams.

Since provisions of the proposed new Resolution dealing with the control of the height and bulk of buildings are of particular concern to architects, the New York Chapter has conducted a special research project to evaluate the findings of the consultants to the Planning Commission. This project was made possible by the Arnold W. Brunner Fund. Bruno Funaro, in association with Geoffrey Baker, was retained by the Chapter to maintain close contact with the work going forward in the office of Harrison, Ballard and Allen, to consult with specialists in the profession with regard to specific provisions of the proposed new Resolution, and to report to the Chapter on completion of their work.

This booklet is the result. It is an analysis in simplified terms of the proposed new Zoning Resolution. It is designed to promote a full understanding of these proposals by the general public as well as by those in the architectural profession and other interested groups. The text has been submitted to Harrison, Ballard and Allen and has been acknowledged by them as an accurate statement of their proposals.

In presenting this booklet, the New York Chapter, American Institute of Architects, wishes to emphasize these facts:

1. An urgent need exists for a new approach to the present regulation governing the height, bulk, coverage, and relationship of buildings in New York City.
2. The study of the problems by Harrison, Ballard and Allen has been carried out with thoroughness and intelligence.
3. The principles set forth in the proposed new Resolution rest on a practical and realistic base.
4. Better buildings will result, in that greater flexibility in planning is permitted.
5. The public interest will be better served than in the present Resolution by the new provisions for light and air, open space, and the storage of vehicles.

The foregoing does not imply blanket approval of the proposed new Resolution by the New York Chapter. There are a number of details which will require further discussion before specific provisions are ready for adoption. These questions do not,

however, affect the soundness of the basic principles. It is impossible to foretell the impact of any new law in all its aspects; and intensive study and particular application of the proposals in various parts of the city may reveal further desirable revisions.

The New York Chapter, American Institute of Architects, stands ready to work with the public officials and the citizens of New York to perfect, and to assist in the adoption of, a new Zoning Resolution which should have such a profound and beneficial effect on the future development of the city.

## *ZONING IN NEW YORK CITY*

New York City was the first city in the United States to adopt a zoning law (called a Resolution); this was in 1916. Since then every new building in New York City has had to conform with the Zoning Resolution as well as the Building Code. The latter prescribes strength of materials, number of exists, room sizes, etc. The Zoning Resolution controls use, height and bulk of buildings for the protection of their immediate surroundings and, ultimately, of the city as a whole.

A zoning law, like any other law, grows obsolete. It must be kept up-to-date with revisions and amendments, and eventually replaced by a new law. New York City has now decided to replace the 1916 Resolution with a new law which should meet the needs of the city for at least 20 years to come. Such a change in the law will eventually affect all those who live and work in any of New York's five boroughs.

## ***ZONING AND THE MULTIPLE DWELLING LAW***

**F**or twenty years now architects and administrators have been plagued by the conflict and overlapping between the building controls imposed by New York City's Zoning Resolution and those imposed by the State's Multiple Dwelling Law. The creators of the proposed new Zoning Resolution have put a great deal of skilled effort into devising controls which will ensure a reasonable amount (far more than the Multiple Dwelling Law demands) of open air and light in the streets and around the buildings of our city. However, many of the most desirable proposals in the new Resolution, and particularly those giving more freedom to the building designer, would be made inoperative were the present Multiple Dwelling Law to remain in effect. It is to be hoped, therefore, that insofar as the MDL intentions are satisfied by the new proposals, New York City may be freed from MDL control of building bulk.

## *WHAT IS ZONING?*

**Z**oning is the act of dividing land into a number of zones, each allotted a specific use, such as single-family houses, apartment houses, office buildings, or factories. This zoning is enforced by a legal ordinance. The legal justification for imposing such restrictions upon private property has always been "the promotion and protection of public health, safety, morals and welfare." These words can be made to justify almost any regulation. Actually, zoning controls are designed for a certain existing set of local conditions, with some intelligent attempt at forecasting conditions in the years ahead. The 1916 ordinance, still in force today, could scarcely be expected to foresee and regulate the enormous growth of automobile use.

**T**his is but one of the present-day problems which need the fresh thought that a newly-framed Zoning Resolution may contain. To judge the work of such con-

trols you must first decide what services a sound zoning ordinance should be expected to provide. At present it may be said that

## ***ZONING HAS FOUR PRINCIPAL PURPOSES***

- 1.** To protect the character of a district.
- 2.** To insure open air and light for streets and windows.
- 3.** To reduce congestion.
- 4.** To promote orderly and economic city growth.

***These purposes are outlined in the ten pages following.***

## ***ZONING CAN PROTECT THE CHARACTER OF A DISTRICT***



**F**or example, zoning can prevent a noisy industrial building being placed in a quiet residential district. This it does by prescribing the type of uses to which a given piece of land may be put. This is but one instance of the way in which zoning may be used to protect the character of a district. It is the most obvious (because it affects everybody's home), but not the most important.

**I**ndustrial and business districts are just as necessary as homes; they are indeed the reason for New York's existence as a city. It is essential that sufficient and suitable space be preserved for industrial and business uses, and full allowance made for their future development.

Districts suitable for industrial and business uses require extensive special public works, such as piers along the waterfront and heavy transportation facilities. These would be wasted if residential buildings, which do not need such facilities, were allowed to occupy land in such districts.

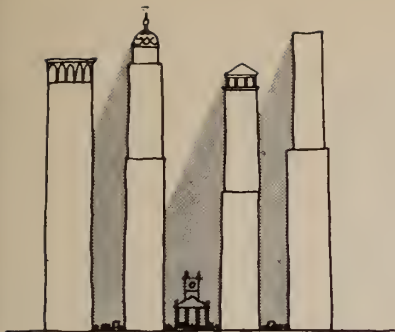
*The present Zoning Resolution* is heavily biased in favor of residential buildings. Residences may be built in every zone. Residential districts are protected from invasion by industrial buildings, but industrial districts are not protected from the intrusion of residential buildings, so that the present Resolution makes no positive allotment of use. In this it reverts to the original conception of zoning as a means of protecting residential areas from noise, smoke, etc.

Already in Long Island City and on Manhattan's upper East Side, for example, waterfront areas most suitable for industry are being developed as residential districts, thus choking off further industrial use.

*The proposed new Zoning Resolution* bans residential building completely from those zones allotted to industry, just as industry is banned from Residence

zones. In all the intermediate zones residential buildings are permitted, but discouraged by applying to them more stringent regulations than apply to the types of building for which the zone in question was intended.

Of course the character of a district is also influenced by the density of its population. In the present Resolution there are certain residential zones where density is controlled by exact specification of building types, e.g. semi-detached houses, row-houses, and single-family houses. In the proposed new Resolution density is controlled entirely by Floor Area Ratio (see page 22). However, zones for single-family houses may be created in those districts where a majority of the property owners so desire.



## *ZONING CAN INSURE OPEN AIR AND LIGHT FOR STREETS AND WINDOWS*

No city should have streets overshadowed by tall solid walls of building without breaks or setbacks. Zoning can prevent this. By limiting the height and bulk of buildings and requiring sufficient open space around each one, both streets and windows will be guaranteed a certain amount of open air and light.

*The present Zoning Resolution* limits the height of buildings on the street. Any frontage above this maximum height must be set back; any tower may cover only one-quarter of the lot. Thus the street is opened out to the sky.

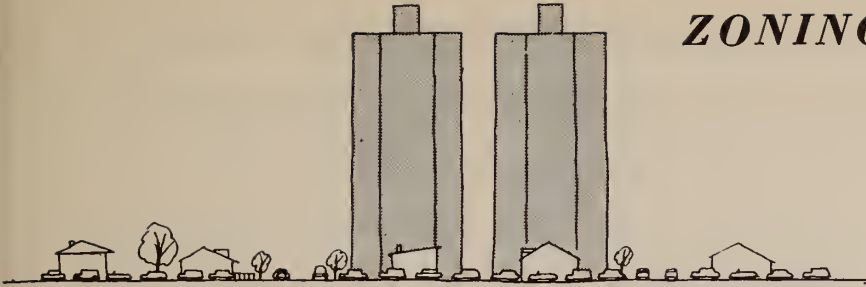
To make sure that windows on other sides of the building receive sufficient light and air, there is an elaborate schedule of minimum sizes for courts and yards. In the case of large buildings this becomes extremely complicated, and in a group of build-

ings on a single large lot (e.g. a modern housing development) it becomes almost impossible to distinguish between rear yards, side yards, inner and outer courts, etc., as specified in the Resolution.

*The proposed Zoning Resolution* continues to limit the height of buildings on the street, but allows this height to be averaged over a limited frontage, so that some sections of the street front may go higher provided that other sections are below the maximum. The street is guaranteed the same amount of light and air as before, but the hands of the building designer are not so closely tied. This should result in more efficient and imaginative buildings. It will also lead to less uniform street fronts.

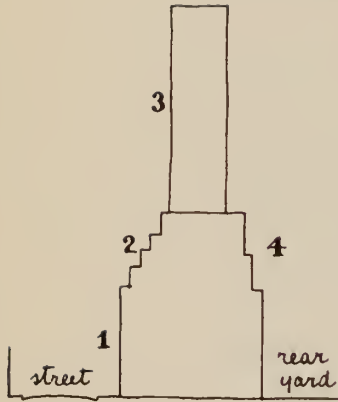
Skipping all the complexities of yard and court in the present Resolution, the new proposals jump directly to the objective of that Resolution. We want to insure that each window receives sufficient light and air. Then let us prescribe a certain amount of unobstructed open space outside each window. The amount is varied according to the building's use; windows in residences must have more than those in offices.

## *ZONING CAN REDUCE CONGESTION*



Suppose a group of 14-story apartment buildings, with a population of more than 100 families to the acre, is erected in a district of semi-detached houses, row houses, and garden apartments, with an average population of only 20 families to the acre. The result is overcrowding, congestion, friction. All the public services, such as schools, sewers, transportation, become overloaded, inefficient. The stores are overcrowded, and there is never enough parking space; so people go elsewhere to shop. Zoning could have prevented this. By imposing limits upon the type and size of buildings (their “bulk”) allowed in each zone, which in turn limits the density of population, zoning can ensure reasonable comfort for everyone. By insisting upon off-street parking space in new buildings, zoning can keep the streets open for the flow of traffic.

*In the present Zoning Resolution* building bulk is controlled by shape. An ingenious, but inadequate, set of specifications, by determining the maximum height and minimum yard size, also governs the building shape.



1. The height of the building on the street is limited.
2. If it goes higher it must be set back.
3. A tower is allowed, of infinite height but limited in area to one quarter of the lot.
4. Rear yards and side yards are controlled by minimum dimensions at ground level and increasing setbacks the higher they go.

This cake-mould method of controlling building size forces upon the structure an actual physical shape which is not necessarily the most economical, the most efficient or the most beautiful. Using setbacks and a tower the bulk of a building on a large lot is, theoretically at least, almost unlimited; on a small lot the tower is uneconomic. Such a system gives no accurate control of population density.

*The proposed new Zoning Resolution* controls the bulk of any building by limiting its total floor area to a certain multiple of the area of the lot on which it is placed. This multiple is known as the Floor Area Ratio (see page 22). If in a given district, for example, the Floor Area Ratio is 2, then the total floor area of any building there must not exceed twice the area of the lot on which it is placed.

This controls only the size of a building, not its shape. The latter is unrestricted as long as it satisfies the requirements which ensure that sufficient open air and light reach the streets and windows (see page 24 and 26).

## ***ZONING CAN PROMOTE ORDERLY AND ECONOMICAL CITY GROWTH***



**M**odern skyscrapers but a few blocks away from decaying slums is typical of almost all big cities. Owners of the outmoded slums let them fall into disrepair, while they hopefully await a rise in land values, or an offer from some aspiring builder of skyscrapers. Zoning should allot to the various necessary types of building the amount of space which would seem reasonable considering the anticipated growth of the city. This would in turn lead to a reasonable balance between the various different uses; employment, residence and accessory services. It should also minimize the amount of vacant and tax-delinquent property, with all that this would mean to the general prosperity of the city.

*Under the present Zoning Resolution, New York is excessively “over-zoned.”* For example, the present residential zones, if built up as far as the law allows,

could accomodate approximately 70 million people. Yet the estimated population for 1970 is only 8½ million. Where too much room is allotted to any one use, development tends to be spotty and wasteful; correlation of this with public utilities and transportation becomes almost impossible. So modern zoning regulations try to be more realistic, quantitatively. But inasmuch as the present Resolution has no direct control over building bulk (see page 16), it cannot be amended into the more realistic and exact control which is necessary here.

*The proposed new Zoning Resolution*, on the other hand, by means of the Floor Area Ratio (see page 22), can be easily and exactly used as a quantitative control. To invent and legalize such a control is not, of course, in itself sufficient. It can be applied with full effectiveness only if those who apply it have a clear plan of development for the city. This proposed new Resolution is based upon a great mass of analytical data, statistics and forecasts. How much land will be needed for this industry and for that, and where shall it be located? How much new population can this district absorb without congestion? Where do we need a shopping center? This is planning, not zoning in the strict sense of the word; but it is essential background for zoning.

## ***CONTROLS TRANSLATE ZONING INTO BUILDING***

**F**or a vast and complex organism such as New York City an effective set of zoning controls cannot be simple. They should, however, be clear, easily applied, and without ambiguities. Everyone agrees that the present Zoning Resolution (still a revised version of the 1916 law) is unnecessarily complicated. On the following pages are the controls proposed in the new Zoning Resolution. They are simple to understand and apply. They are flexible and adaptable.

**Floor Area Ratio:** page 22

**Angle of Light Obstruction:** page 24

**Area for Light Access:** page 26

**Usable Open Space:** page 30

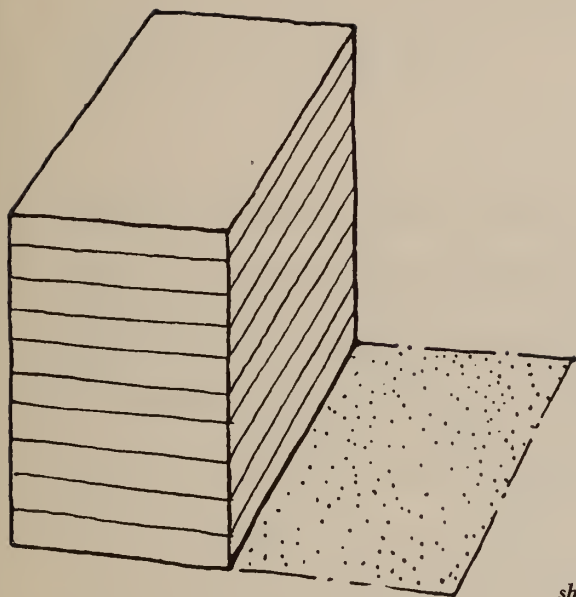
**Off-Street Parking. Loading Berths:** page 32

**Miscellaneous Additional Controls:** page 33

## ***FLOOR AREA RATIO***

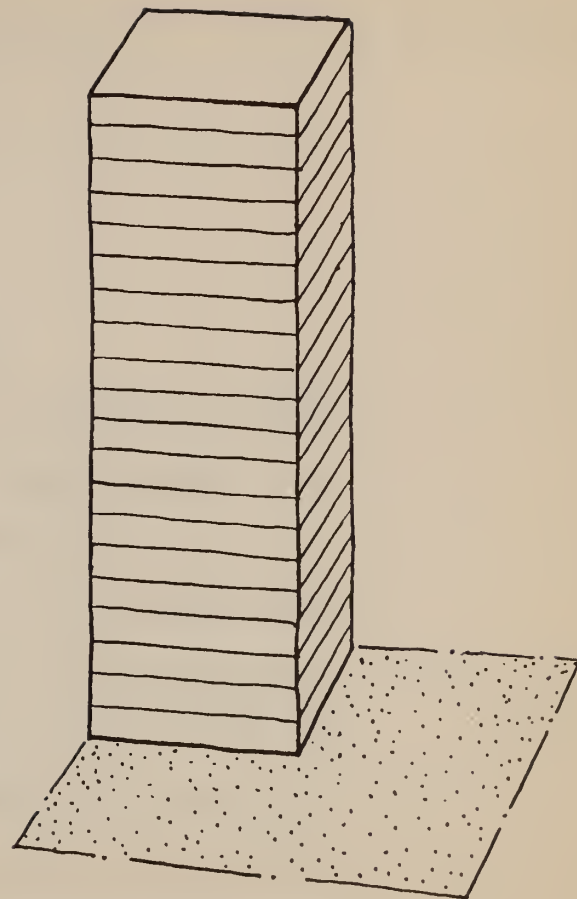
The purpose of this control is to prevent congestion by putting a limit on the number of people living or working in a given district. However, it would not be practical to specify or enforce an actual population count so, instead, a control is laid upon floor area. The Floor Area Ratio is a figure which specifies the total allowable floor area of any building as so many times the area of the lot on which it is placed. Each zoning district has an established maximum FAR.

A Floor Area Ratio of 5 means that the total floor area of the building may not be more than 5 times the area of the lot. As shown diagrammatically on the opposite page, if the building occupies only half the lot it may be 10 stories high. If it occupies only one-quarter of the lot it may be 20 stories high.



*either a 10-story building covering 50% of the lot,*

*A lot with Floor Area Ratio 5,  
showing two alternatives:*

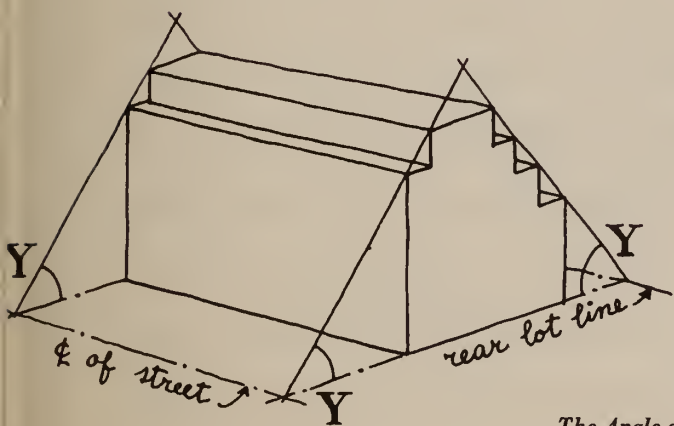


*or a 20-story building covering 25% of the lot.*

## *ANGLE OF LIGHT OBSTRUCTION*

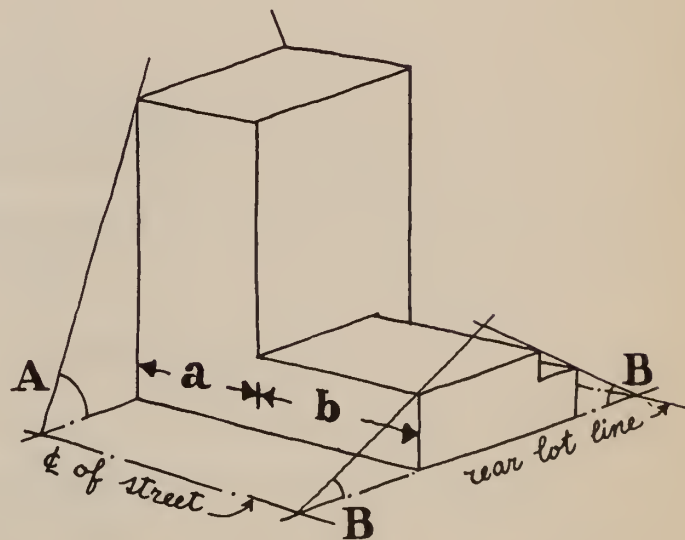
The height of building is limited by means of the Angle of Light Obstruction, so that adequate open air and light may reach the streets and rear yards. Each district is allotted a certain ALO. This is measured from the center line of the street and from the rear lot line. It is similar to the present regulation of height and setbacks, though expressed in angles instead of vertical and horizontal distances. However, to give more freedom of design and allow for more efficient building shapes, without sacrificing light and air, the ALO may be "averaged"; so that some sections of a building may rise above the allotted angle line, provided that an equally large or larger section drops below it. To avoid overlong stretches of high wall, this averaging is limited to a frontage length of not more than  $1\frac{1}{2}$  times the width of the street in residential districts and twice the width of the street in all other districts.

To avoid too much height in any section on the street front, a minimum angle is set for calculating the low building sections, and buildings in residential districts may only exceed their allotted average angle for half the street frontage of the lot. And the overall bulk is still controlled by the Floor Area Ratio.



*The Angle of Light Obstruction Y*

*may be kept constant along the whole street frontage,*



*or averaged by the formula  $Y = \frac{Aa + Bb}{a + b}$*

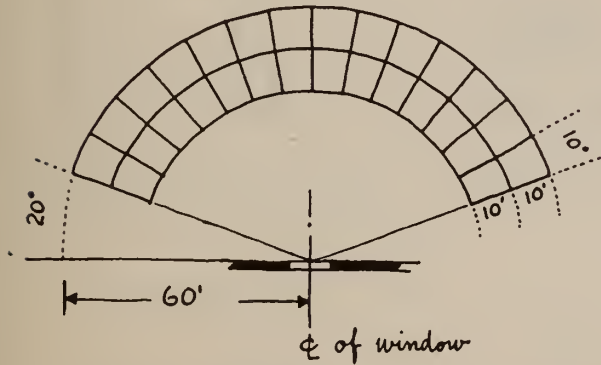
## ***AREA FOR LIGHT ACCESS***

All windows which are needed to satisfy the ventilation requirements of the Building Code and the Multiple Dwelling Law will have to give upon a certain minimum of open space known as the Area for Light Access. This can be easily and quickly measured with a graphic device marked off in a series of wedge-shaped sections.

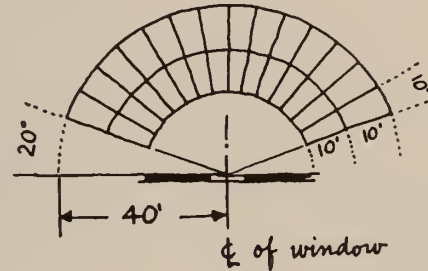
The required ALA may be within the lot upon which the building is placed, or on the street, or on the required open yard of an adjoining lot. Even if that lot contains an older, non-conforming building, it may be assumed that its yards already conform to the more spacious standards set by the new Resolution. However, it must also be assumed that on every adjacent lot is a building of infinite height. The sole exception to this is where several adjoining buildings are under one ownership (and therefore of a known, fixed height).

In such a case, when computing the ALA for a window in one unit of the building group, any nearby unit which is below a plane about 35 degrees above the horizontal at sill level (see page 28), need not be considered as a light obstruction. But the buildings must always be a certain minimum distance apart.

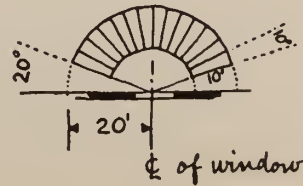
*The Area for Light Access is measured by a series of wedges marked out within the segments of a circle.*



*For residential buildings the wedges are within the band between 40 and 60 ft. from the window. Eight wedges (six of them contiguous) must be unobstructed.*



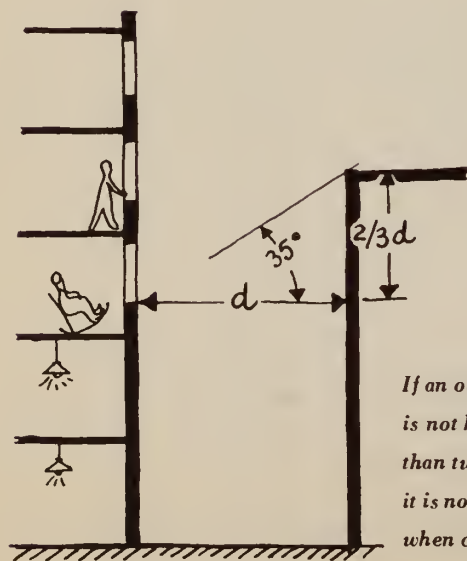
*For low-bulk commercial buildings the wedges are within the band between 20 and 40 ft. from the window. Eight wedges (six of them contiguous) must be unobstructed.*



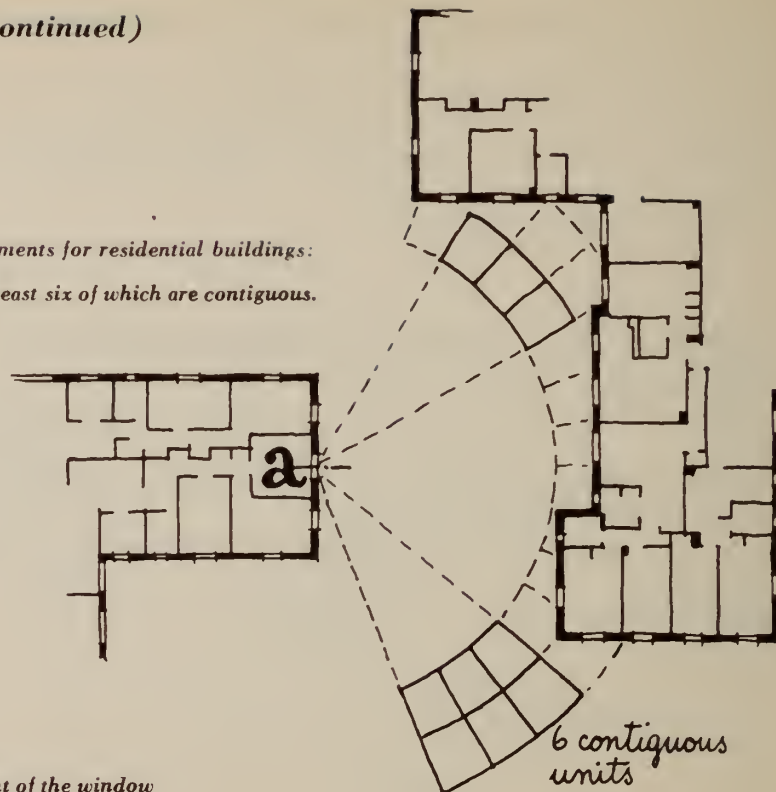
*For high-bulk commercial and manufacturing buildings the wedges are within the band between 10 and 20 ft. from the window. Eight wedges (all contiguous) must be unobstructed.*

## AREA FOR LIGHT ACCESS (continued)

*The window at  $a$  satisfies the requirements for residential buildings:  
a minimum of eight Units of Light Access, at least six of which are contiguous.*

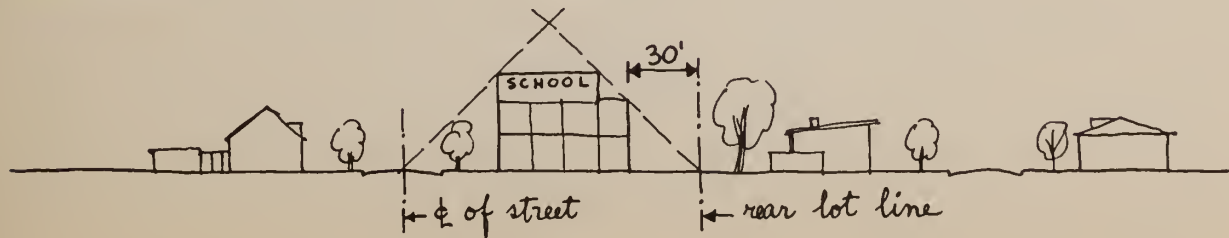


*If an obstruction in front of the window  
is not higher (from the sill line)  
than two-thirds the distance from that window,  
it is not considered an obstruction  
when checking the window for Units of Light Access.*



## ***SET-BACKS FOR NON-RESIDENTIAL BUILDINGS IN LOW-DENSITY RESIDENTIAL DISTRICTS***

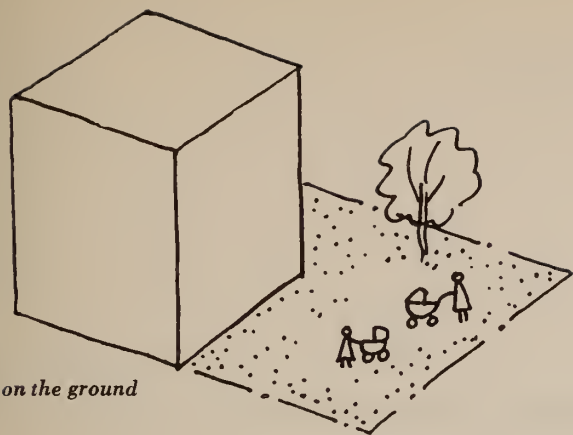
In low-density residential districts (RA1, RA2 and RB1), the height of non-residential buildings, may not exceed at any point the distance of those buildings (in RB2 districts 1½ times the distance) from the center line of the street, and from the side and rear lines of the lot. This is to insure that large buildings such as schools and firehouses, which are essential in residential neighborhoods, shall not overwhelm by their size, the neighboring small houses.



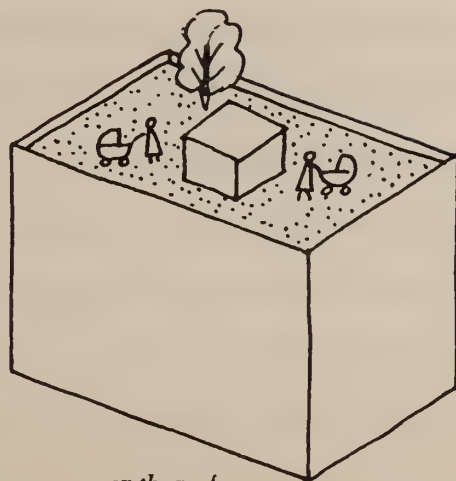
## *USABLE OPEN SPACE*

In all residential buildings (except in the high-density apartments allowed in midtown Manhattan) suitable outdoor space for recreation and drying yards, accessible to all tenants, must be provided and properly maintained. The space required is proportional to the number of dwelling units and varies from one district to another.

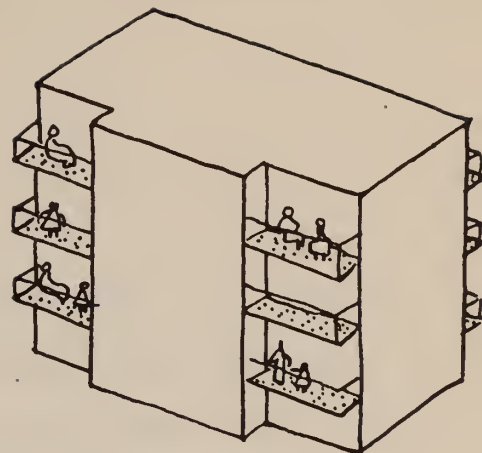
It may be provided on the ground, and in the more congested districts on the roof, or on balconies. Balcony space counts double; and a dwelling unit with access to sufficient balcony space need not be included when computing the total open space required. This outright encouragement of balconies has already met with considerable criticism. It is also felt that some part of the required usable open space should be covered, for protection from the weather.



*on the ground*



*on the roof*



*on the roof and balconies  
(only in medium- and high-density districts)*

## OFF-STREET PARKING, LOADING BERTHS

Parking space and loading berths off the street are specified requirements in all but the smaller buildings. In this, New York City follows the lead of other cities in forcing building owners to do their share in trying to relieve traffic congestion. The new Resolution covers parking and loading facilities in very great detail, varying its requirements to fit various conditions of building size, use, district, etc.

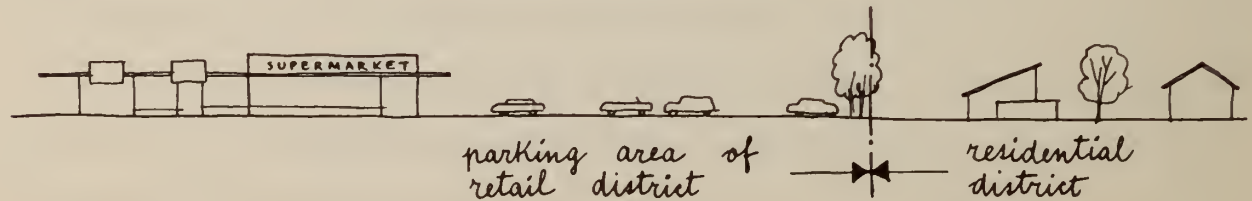
As there are minimum requirements there are also maximum, to prevent residential buildings being turned into garages. All are set out in tables which list the possible combinations (*see the example reproduced on page 48*). Although they look complicated, such tables have the advantage of allowing details to be easily amended without upsetting the whole system.

## *NON-CONFORMING BUILDINGS*

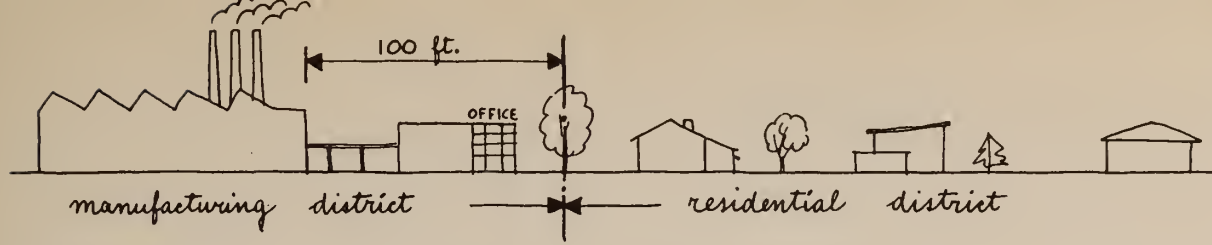
After approval of the proposed new Zoning Resolution a large number of buildings will immediately become non-conforming in use and in bulk. Such buildings will be allowed to continue non-conforming as long as they are not substantially altered. Contrary to the present rules, a change of use is allowed even though the new use is still non-conforming, provided that this use has more affinity than the old with the uses permitted in that zone. For example, a welding shop located in a residential zone may be converted into a drugstore, also non-conforming but less undesirable. Non-conforming uses which are objectionable, for example a factory in a residential district, must be removed after a certain period allowed for amortization. Buildings which are non-conforming only in bulk may be extensively altered provided that the extent of their non-conformity is not increased.

# TRANSITION ZONING

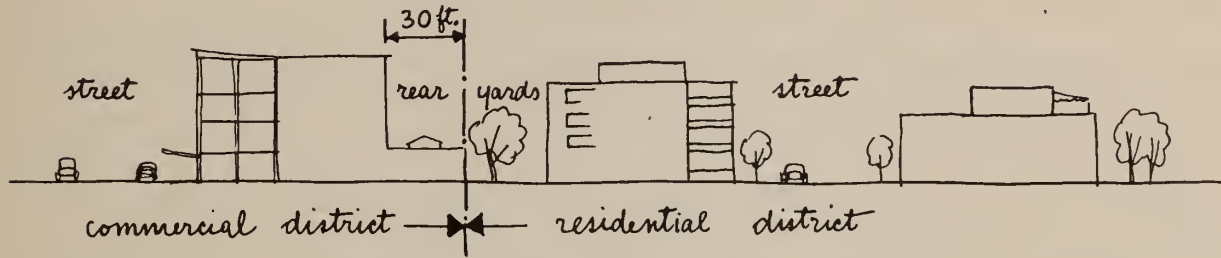
This is applied at the boundary between residential and non-residential districts to prevent this becoming a no-man's-land, undesirable for residences yet so zoned that it cannot be used for anything else. The proposed new Zoning Resolution continues and extends the curbs upon business signs, show windows, and entrances to stores adjoining residential districts. However, the new Transition Zoning rules cover a much wider range of possibilities. Three examples are shown:



1. In retail and commercial districts parking areas which adjoin a residential zone must be shielded by walls, shrubs, or trees along the boundary line.



2. In industrial districts adjoining a residential zone a 100 ft. wide strip along the boundary line cannot be used for actual manufacture but must be reserved for less objectionable uses, for example, an administration building or a parking lot.



3. In non-residential lots which are back to back with residential, 30 ft. deep rear yards are prescribed, though a single story rising not more than 23 ft. above curb level may extend to the rear lot line.

## *LARGE-SCALE DEVELOPMENTS*

**I**n order to forward a large-scale development certain zoning rules may be slightly changed, after approval by the City Planning Commission. The prescribed use in a zoning district may be changed for up to 20% of the total area of the development without a change in the Zoning Map. The permitted Floor Area Ratio may be averaged over the whole site, even though it covers more than one city block. In the same way front yard and height requirements may be waived for those sections of public roadway entirely within the site. Where streets running through the site are closed, approximately half of this added site area may be taken into account when computing Floor Area Ratio. This last rule is a compromise aimed at encouraging superblock planning while keeping a curb on the increased density which would otherwise follow in its train.

**A** new and special requirement: if any development is designed to house more than 500 families, the City Planning Commission is required to check the ade-

quacy of school and community facilities in the neighborhood before a building permit can be issued. This should help to avoid the last-minute purchase by the city of school sites in growing neighborhoods, when the only land available is usually poorly located, too small, and unreasonably expensive.

## ***AIRPORTS***

**B**uildings within two miles of any major airport are subject to special height restrictions. The permitted height varies directly as the distance from the airport in a ratio of 1:50. In the case of minor airports (none so far mapped), within an approach area of  $\frac{1}{2}$  mile radius maximum permitted heights will be established from time to time as necessary by the City Planning Commission, but will never be less than 30 ft.

## *THE MAP IS AN INDEX OF THE CONTROLS*

*In the present Zoning Resolution* every piece of property in the city is subject to three different types of control, each districted on a separate map.

Use districts limit the type of building permitted, Height districts its height, Area districts the size of courts and yards. The boundaries of these various districts seldom coincide. Moreover, it is not easy to introduce new or amending restrictions (such as parking requirements, for example) which cannot be definitely classified under Use, Height, or Area. And yet, in spite of its rigidity, the intentions of the present Resolution have been successfully flouted. The D, E, and F districts, intended for single-family and two-family houses, were defined in terms so remote from the Resolution's actual purpose that they were invaded by apartment houses; whereupon it became necessary to create four entirely new

districts, D-1, E-1, G and G-1, which stated their purpose more exactly.

*The new Zoning Resolution* proposes a single map system, each district being given complete specifications of Use, Height, Yards, and any other provisions which it may be felt necessary to add from time to time. Administratively the advantages of such a system are large and obvious. The property owner can quickly find out, by referring to a single map, exactly what he is or is not allowed to build on his property. The realtor or builder, searching for a piece of property on which he may put a certain type of building, can quickly review all possible sites by reference to this same map.

A small section of the tentative new zoning maps is shown on the following page. The various districts are keyed by a symbol, the initial letter of which indicates the broad use category, either Residence, Commercial or Manufacturing. RB5, for example, is a Residence District and MC1 a Manufacturing District. In this particular section there happens to be a preponderance of RB5. These districts are intended for medium-density apartment houses. The residential area is crisscrossed by Residence Retail districts (RRB and RRC) for first-floor stores and offices to serve the surrounding residential area. Commercial

districts are mapped along some of the principal thoroughfares and along a railroad (bottom right). The area along the river front in the upper left corner is reserved for manufacturing. Residences are excluded from that area.

In order that this new map may conform as far as possible to the wide variety of existing conditions, and also set a pattern for the city's future growth, a large number of separate district classifications have been created.

*The principal regulations proposed for each of these mapped districts are summarized in specially prepared tables on the following eight pages.*

MC1

RB5

UNITED STATES VETERANS  
HOSPITAL NO. 61

SEOWWICA  
WEBB  
ACADEMY  
HOME

DEVORE PARK

ST. JAMES  
PARISH

CONCOURSE

FORDHAM  
UNIVERSITY

RB4

NEW YORK  
UNIVERSITY

RB5

RB6

RB5

RB5

RB6

RB5

CM2

CM2

# BULK REGULATIONS FOR RESIDENCE DISTRICTS

DISTRICT	FLOOR AREA RATIO	FRONT YARD (IN FEET)	REAR YARD (IN FEET)	ANGLE OF LIGHT OBSTRUCTION FRONT AND REAR		SIDE YARD
				PERMITTED AVERAGE	MINIMUM CREDITED	
<b>RA1</b> One-family detached Residence	0.5	15	30			Two required: combined width 20 ft., minimum width 5 ft.
<b>RA2</b> One-family detached Residence	0.5	15	30			Two required: combined width 15 ft., minimum width 5 ft.
<b>RB1</b> General Residence <sup>(a)</sup>	0.5	15	30	35°	10°	One-and-two story residential buildings. 8 ft. each side <sup>(c)</sup>
<b>RB2</b> General Residence <sup>(a)</sup>	0.8	15	30	45°	10°	Optional—Minimum 8 ft.
<b>RB3</b> General Residence <sup>(a)</sup>	1.4	10 <sup>(n)</sup>	30	55°	15°	Optional—Minimum 8 ft.
<b>RB4</b> General Residence <sup>(a)</sup>	2.4		30	60°	18°	Optional—Minimum 8 ft.
<b>RB5</b> General Residence <sup>(a)</sup>	3.5		30	65°	20°	Optional—Minimum 8 ft.
<b>RB6</b> General Residence <sup>(a)</sup>	5.0		30 <sup>(p)</sup>	67°	25°	Optional—Minimum 8 ft.
<b>RB7</b> General Residence <sup>(a)</sup>	10		30 <sup>(p)</sup>	69°	30°	Optional—Minimum 8 ft.
<b>RM</b> Residence—Restricted Mfg. <sup>(m)</sup>	0.3 <sup>(b)</sup> and 0.5	40	100 <sup>(p)</sup>	35°	10°	100 ft. if adjoining residences; otherwise 40 ft.
<b>RRA, RRB, RRC</b> Residence Retail <div>             These are subject to the restrictions of the residence zones in which they are mapped (except that the Area of Light Access is of 40 ft. radius for first-floor stores). In RRB the maximum permitted store site is 2,000 sq. ft.           </div>						

AREA OF LOT ACCESS RADIUS IN FEET)	USABLE OPEN SPACE		(i) SETBACKS
	MINIMUM SQ. FT. PER DWELLING UNIT	MINIMUM DIMENSION	
60	800	30 (b)	1 ft. back, 1 ft. up
60	800	30 (h)	1 ft. back, 1 ft. up
60	600	30 (h)	1 ft. back, 1 ft. up
60	400	30 (h)	1 ft. back, 1.5 ft. up (k)
60	200 (d)	30 (h)	
60	125 (e)	30	
60	100 (f)	30	
60	75 (g)	30	
60			
60			

#### NOTES

(a) Single-family detached residences in this district must conform to RA2 regulations.

(b) 0.3 is for manufacturing uses, 0.5 is for residential uses and accessory services. Any part of the site not used for buildings must be landscaped.

(c) More if building is over 60 ft. long—6 ins. every 10 ft.

(d) Not less than one-sixth of total floor area; and need not be more than one-third.

(e) Not less than one-tenth of total floor area; need not be more than one-fifth.

(f) Not less than one-twelfth of total floor area; need not be more than one-sixth.

(g) Not less than one-fourteenth of total floor area; need not be more than one-seventh.

(h) Only 18 ft. for residential buildings with less than 4,200 sq. ft. total floor area.

(i) For all permitted non-residential buildings more than two stories high.

(k) Applies on side lot lines only. For all permitted non-residential buildings more than three stories high.

(m) Residences, schools, hospitals, etc., in this district must conform to RB1 regulations.

(n) Where such yards prevail.

(o) If adjoining residences, otherwise 40 ft.

(p) In RB6, RB7 and RM the rear yard may be measured above a single story not more than 23 ft. high extending to the rear lot line.

# BULK REGULATIONS FOR COMMERCIAL DISTRICT

DISTRICT	FLOOR AREA RATIO	ANGLE OF LIGHT OBSTRUCTION				(a) REAR YARD (IN FEET)	OPTIONAL SIDE YARD MINIMUM (IN FEET)
		FRONT		REAR			
		PERMITTED AVERAGE	MINIMUM CREDITED	PERMITTED AVERAGE	MINIMUM CREDITED		
CA1 Restricted Commercial-Residence	3.5	65°	20°	65°	20°	30	8
CA2 Restricted Commercial-Residence	10	69°	30°	69°	30°	30	8
CA3 Restricted Commercial	10	69°	30°	78°	30°	10	8
CA4 Restricted Commercial	15	73°	35°	78°	30°	10	8
CB1 General Commercial	1	50°	12°	50°	12°	20	8
CB2 General Commercial	1.4	55°	15°	55°	15°	20	8
CB3 General Commercial	2.4	60°	18°	60°	18°	20	8
CB4 General Commercial	5	67°	25°	72°	25°	10	8
CB5 Central Commercial-Wholesale	10	69°	30°	78°	30°	20	8
CB6 Central Commercial-Amusement <sup>(c)</sup>	10	69°	30°	78°	30°	20	8
CC Open Commercial—Amusement	2.4	67°	25°	72°	25°	20	8
CD1 Heavy Commercial	0.8	45°	10°	45°	10°	20	8
CD1 Heavy Commercial	1.4	55°	15°	55°	15°	20	8
CD3 Heavy Commercial	5	67°	25°	72°	25°	10	8
CM1 Commercial—Manufacturing	1.4	55°	15°	55°	15°	20	8
CM2 Commercial—Manufacturing	3.5	60°	18°	60°	18°	10	8

AREA OF LIGHT ACCESS RADIUS (IN FEET)	RESIDENCES TO CONFORM TO BULK CONTROL OF DISTRICT
20	RB7
20	RB7
20	RB7
20 <sup>(b)</sup>	RB7
40	RB2
40	RB3
40	RB4
20	RB6
20 <sup>(b)</sup>	RB7
20 <sup>(b)</sup>	RB7
40	RB4
40	RB1
40	RB3
20 <sup>(b)</sup>	RB6
40	RB3
20	RB5

#### NOTES

(a) These dimensions may be applied above a single story (not rising more than 23 ft. above mean curb level) which may extend all the way to the rear lot line.

(b) For hotels and similar types of permitted use radius must be 40 ft.

(c) Same as CB5, except for certain sign regulations.

# BULK REGULATIONS FOR MANUFACTURING DISTRICT

DISTRICT	FLOOR AREA RATIO	ANGLE OF LIGHT OBSTRUCTION				(a) REAR YARD (IN FEET)
		FRONT		REAR		
		PERMITTED AVERAGE	MINIMUM CREDITED	PERMITTED AVERAGE	MINIMUM CREDITED	
<b>MA1</b> Light Manufacturing	10	69°	30°	78°	30°	10
<b>MA2</b> Light Manufacturing	15	73°	35°	78°	30°	10
<b>MB1</b> General Manufacturing	2	60°	18°	60°	18°	10
<b>MB2</b> General Manufacturing	5	67°	25°	72°	25°	10
<b>MB3</b> General Manufacturing	7	69°	30°	78°	30°	10
<b>MC1</b> Industrial—Manufacturing	2	60°	18°	60°	18°	10
<b>MC2</b> Industrial—Manufacturing	5	67°	25°	72°	25°	10
<b>MC3</b> Industrial—Manufacturing	7	69°	30°	78°	30°	10
<b>MD</b> Heavy Industrial—Manufacturing	5	67°	25°	72°	25°	10

OPTIONAL SIDE YARD MINIMUM (IN FEET)	AREA OF LIGHT ACCESS RADIUS (IN FEET)
8	20
8	20
8	20
8	20
8	20
8	20
8	20
8	20
8	20

**NOTES**

(a) These dimensions may be applied above a single story (not rising more than 23 ft. above mean curb level) which may extend all the way to the rear lot line.

# **PARKING REQUIREMENTS** *for retail, service, commercial and manufacturing*

DISTRICTS	FOR ALL ESTABLISHMENTS WITH AT LEAST THE FOLLOWING TOTAL FLOOR AREA IN SUCH USE (SQUARE FEET)	
<b>CB1, CD1 <sup>(b)</sup>, Residence Retail within RA, RB1, RB2, RM</b>	3,000	
<b>CD2, and CM1 <sup>(b)</sup></b>	3,000	
<b>CB2, Residence Retail within RB3</b>	6,000	
<b>CB3, Residence Retail within RB4</b>	10,000 or 7,500 on ground floor	
<b>RM, MB1, MC1, MD</b>	5,000	
<b>Residence Retail within RB5</b>	15,000	
<b>CM2, MB2, MC2</b>	10,000	
<b>CA1, CB4, CC, CD3, MB3, MC3</b>	50,000	
<b>CA2, CA3, CB5, CB6, MA1</b>	100,000	
<b>CA4, MA2</b>	150,000	

uses in groups 6 (A, B, D), 7, 8, 9 (A, B, C, E, F), 10 (A, C, E), 12 (A), 13. (B, C, D, E),  
14, 15 (A, B), 16 (A, B), 17 (A), 18 (A)<sup>(a)</sup>.

ONE PARKING SPACE REQUIRED FOR EACH UNIT OF FLOOR AREA (OR FRACTION THEREOF) SPECIFIED BELOW	
FOR ALL GROUND FLOOR AREA (SQ. FT.)	FOR ALL OTHER FLOOR AREA (SQ. FT.)
300	1,000
600	1,000
600	1,000
600	1,500
FOR ALL FLOOR AREA	
1,000	
1,500	
2,000	
1,000 (between 50,000 and 100,000)	
1,500 (above 100,000)	
1,500 (from 100,000 to 200,000)	
3,000 (above 200,000)	
2,000 (from 150,000 to 300,000)	
4,000 (above 300,000)	

#### NOTES

(a) These key numbers and letters refer to the complete list of uses which is included in the text of the proposed Resolution. This list covers many printed pages and is therefore not included in this booklet.

(b) In a CD1, a CD2 and a CM1 district, in no case shall less than 20% of the area of a zoning lot be reserved for accessory off-street parking spaces.

This table (still tentative) is shown only as a sample of the thoroughness with which parking has been treated in an effort to encompass flexibly the great variety of conditions to be found in New York City. In fact the same type of building may require a different amount of parking space according to the type of district in which it is set.

For example a supermarket (Use Classification 6A) located in a Residence Retail district must provide a certain amount of parking if that particular Residence Retail district is mapped within a low-density (RA, RB1, RB2) residential district, a different amount if it is within a medium-density (RB5) residential district. From this table it can be seen that in the first case a supermarket of 60,000 sq. ft. requires 200 parking spaces; in the second case a supermarket of the same size requires only 40 spaces.

# ***HOW THE NEW ZONING RESOLUTION WILL WORK IN PRACTICE***

*(The example is that of an apartment house in a residential district.  
For other building types in other districts the regulations are fewer  
and less restrictive.)*

On a typical lot 110 x 100 ft. in the Bronx, an owner wishes to build a six-story multiple dwelling with six apartments per floor. First we consult the Zoning Map and find that the Zoning District of our lot is RB5. Then we refer to the text of the Zoning Resolution and find listed under RB5 complete Zoning specifications for this district.



*The lot under discussion is in an RB5 district  
as seen on the Zoning Map.*

## 225.10. USE REGULATIONS

In a Residence B5 district, all the use regulations of a Residence B1 district shall apply.

Checking the list of uses permitted in zoning district RB1, we find that it includes all types of residential buildings with the exception of hotels. Some non-residential uses are also permitted, for example: public parks, nurseries and truck gardens (provided that no offensive odors and dust are created), schools, churches, clubs, hospitals and other community services.

## 225.11. REQUIRED USES

1. *Off-Street Parking.* Accessory off-street parking spaces, open or enclosed, in conformity with the provisions of Section 1022.20 line 6 of table and Section 1022.21 (residential parking requirements).

Section 1022.21, to which we are referred, states that off-street parking is required in RB5 districts for all residence buildings erected on a lot of more than 10,000 sq. ft. and containing more than 33 dwelling units. Since this lot is 11,000 sq. ft. and we contemplate 36 dwelling units, off-street parking must be provided. The minimum number of parking spaces required, according to Section 1022.20, is 30% of the number of dwelling

units. In our case, that will mean 11. Each parking space requires at least 300 sq. ft. They may be placed either outdoors, but within the area of the lot, or indoors.

#### 225.20. BULK REGULATIONS

Subject to the provisions of Section 140 (bulk control clause) and Article 7 (basic bulk definitions and regulations), the following bulk regulations shall apply in a Residence B5 district:

#### 225.21. BASIC BULK REGULATIONS

##### 1. *Maximum Floor Area Ratio Permitted.* 3.50.

The total Floor Area Ratio permitted will be  $3.5 \times 110 \times 100 = 38,500$  sq. ft. This gives us an average floor area of 1070 sq. ft. per apartment.

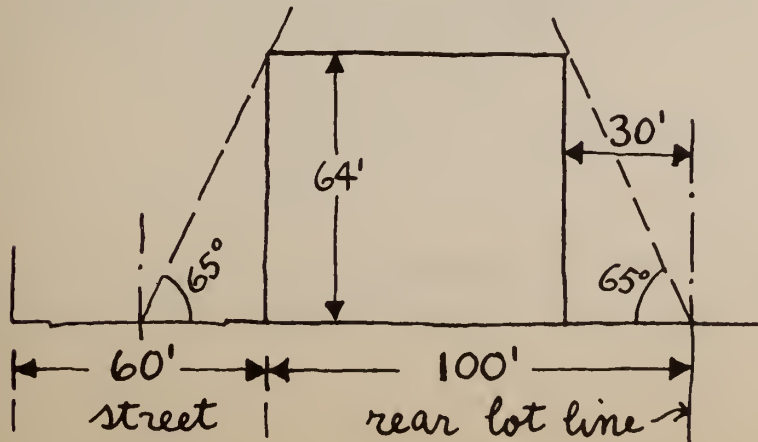
2. *Required Minimum Usable Open Space.* One hundred (100) square feet per dwelling unit [ $100 \times 36 = 3,600$  sq. ft.], provided that required usable open space shall in no case be less than one-twelfth ( $1/12$ ) of floor area, [ $38,500/12 = 3,200$  sq. ft.] and need not be more than one-sixth ( $1/6$ ) of floor area [ $38,500/6 = 6,400$  sq. ft.] The minimum dimension of such usable open space shall in all cases conform to the provisions of Section 730 (usable open space) [30 ft. for District Residence B5]

However, section 730 states also that in zoning districts RB4, RB5 and RB6, apartments equipped with balconies need not be included when computing, provided

each balcony has a width of at least 4 ft. 6 in. and an area at least half the minimum Usable Open Space specified per dwelling unit (in this case  $100/2 = 50$  sq. ft.). Let us assume that 6 apartments will be provided with balconies. This leaves us still with 30 units for which 3,000 sq. ft. of UOS must be provided ( $30 \times 100 = 3,000$  sq. ft.).

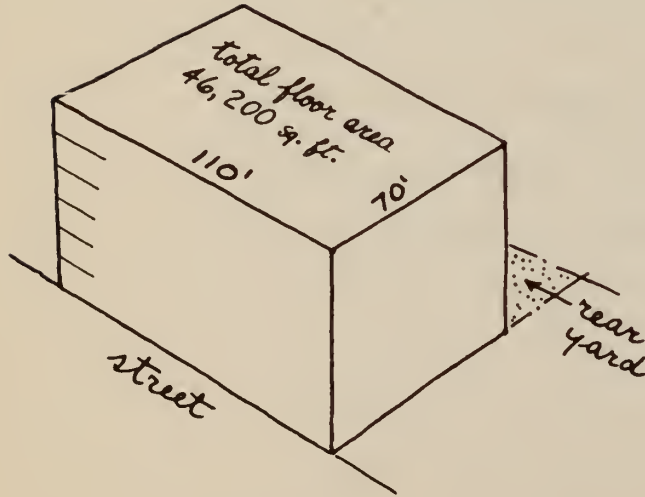
3. *Maximum Angle of Light Obstruction Permitted, Front and Rear.* Sixty-five (65) degrees. If angles are averaged, an angle of less than twenty (20) degrees shall be counted as an angle of twenty (20) degrees for averaging.

A 65 degree angle would permit a continuous wall 64 ft. high both on the street and on the 30 ft. rear yard. This is sufficient for our contemplated six-story building without need of “averaging” the angle. However, a solid six-story building without courts,

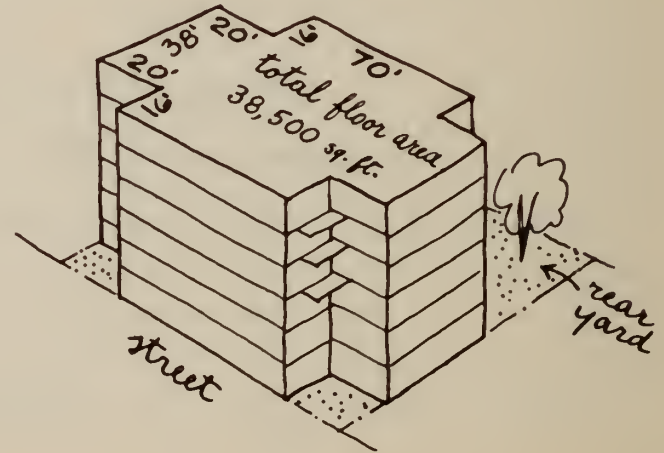


The maximum Angle of Light Obstruction is 65 degrees.  
This permits a building 64 ft. high.

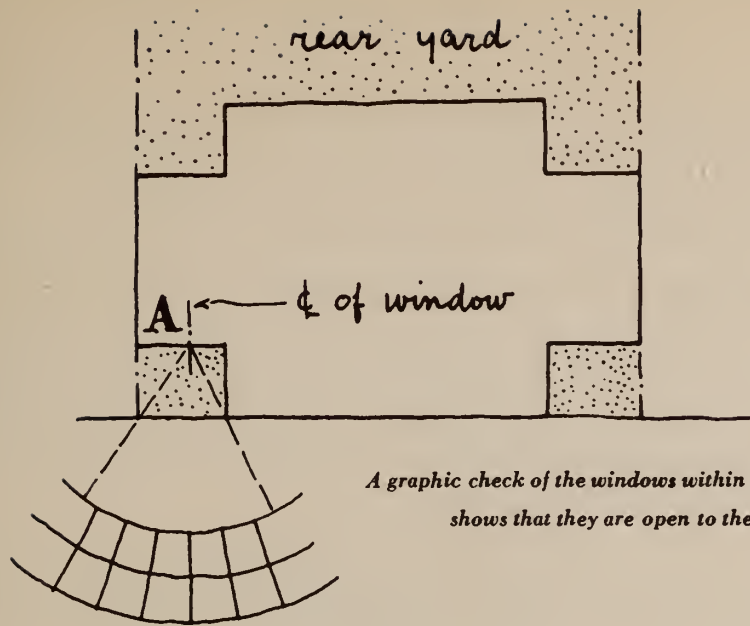
filling the lot from street to rear yard, would have a total floor area of  $110 \times 70 \times 6 = 46,200$  sq. ft., which is beyond the 38,500 sq. ft. permitted by the Floor Area Ratio and thus illegal. So we reduce the floor area with open courts facing the street and the rear yard. In these open courts we could place the balconies which may provide some of the required Usable Open Space.



*The maximum cube permitted by the Angle of Light Obstruction in this case exceeds the permitted total floor area of 38,500 sq. ft.*



*so open courts at each corner reduce the total floor area to the permitted maximum.*



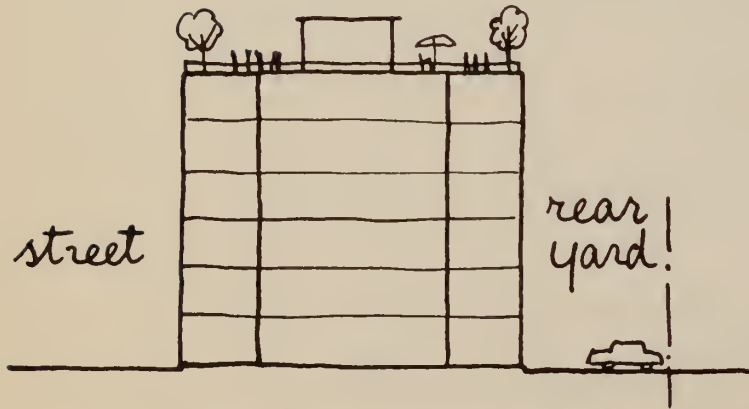
*A graphic check of the windows within the court at A shows that they are open to the required number of Light Access Units.*

4. **Minimum Light Access Units.** Light Access units in accordance with the requirements set forth in Section 750 (Light Access units).

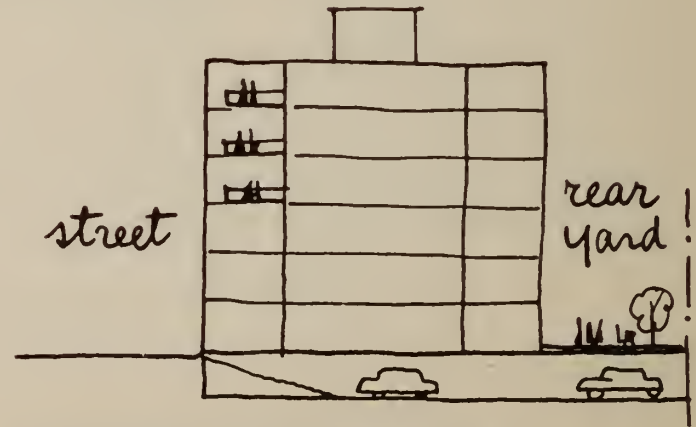
Section 750 specifies for all residential districts 8 units of Light Access, at least 6 of which must be contiguous. In district RB5, the Area of Light Access will be of 60 ft. radius (see our explanatory diagram on page 27). A graphic check of the window located at A shows that the requirements are satisfied.

5. *Required Rear Yard.* Thirty (30) feet, either at ground level or not more than six (6) feet above ground level if accessory off-street parking spaces are provided underneath.

The rear yard will be  $30 \times 110 = 3,300$  sq. ft. The rear yard could be used for the required off-street parking ( $300 \times 11 = 3,300$  sq. ft.) but it cannot double as parking space and Usable Open Space. So if the rear yard is used for parking, the UOS will have to be on the roof. Roof space can be substituted for UOS on the ground in zoning districts



*Off-street parking is placed in the rear yard;  
Usable Open Space on the roof.*



*A possible alternate: off-street parking in the cellar,  
Usable Open Space in the rear yard and on private balconies.*

RB4, RB5, and RB6. The roof area in this case far exceeds the required total of UOS, so that no private balconies need be provided. Alternatively, the required off-street parking could be located in a cellar (defined as a story with more than half its total height below mean curb level, and therefore not counted in computing Floor Area Ratio) and extend under the rear yard. The UOS could then be placed in the rear yard over the roof of the garage.

6. *Required Width of Side Yard.* If any side yard is provided, its width shall be eight (8) feet.

No side yards are contemplated.

#### 225.22. OTHER BULK REGULATIONS

1. *Regulations in Other Articles.* In addition the regulations in the Sections set forth below shall apply in a Residence B5 district:

Building non-conforming as to bulk . . . . .	Article 9
Transition regulations — Side yards . . . . .	Section 1341
Height regulations around airports . . . . .	Section 1410 and 1420
Miscellaneous overlay regulations — Small parks . . . . .	Section 1530
Administrative provisions . . . . .	Article 16

This section lists all those additional special regulations which might apply to this particular building, and they should, of course, be checked by the architect.

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